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Tolerance response and metabolism of acetic acid by biodetoxification fungus

Amorphotheca resinae ZN1

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Highlights

Acetic acid is a prior substrate for A. resinae ZN1 to glucose and xylose.

Acetic acid consumption is highly accelerated by solid state culture.

Acetic acid is assimilated through the TCA cycle and/or glyoxylate cycle.

Transport and metabolism are important tolerance responses to acetic acid.

Abstract

Removal of acetic acid from pretreated lignocellulose biomass is an important step for the consequent fermentation on production of cellulosic ethanol and biobased chemicals. This

study elucidates the biological metabolism and tolerance response of acetic acid by a widely

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